



Montpelier Capitol Complex Flooding Response

State and Federal Rules Affecting
Repairs and Mitigation

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Relevant Code Review

National Electrical Code

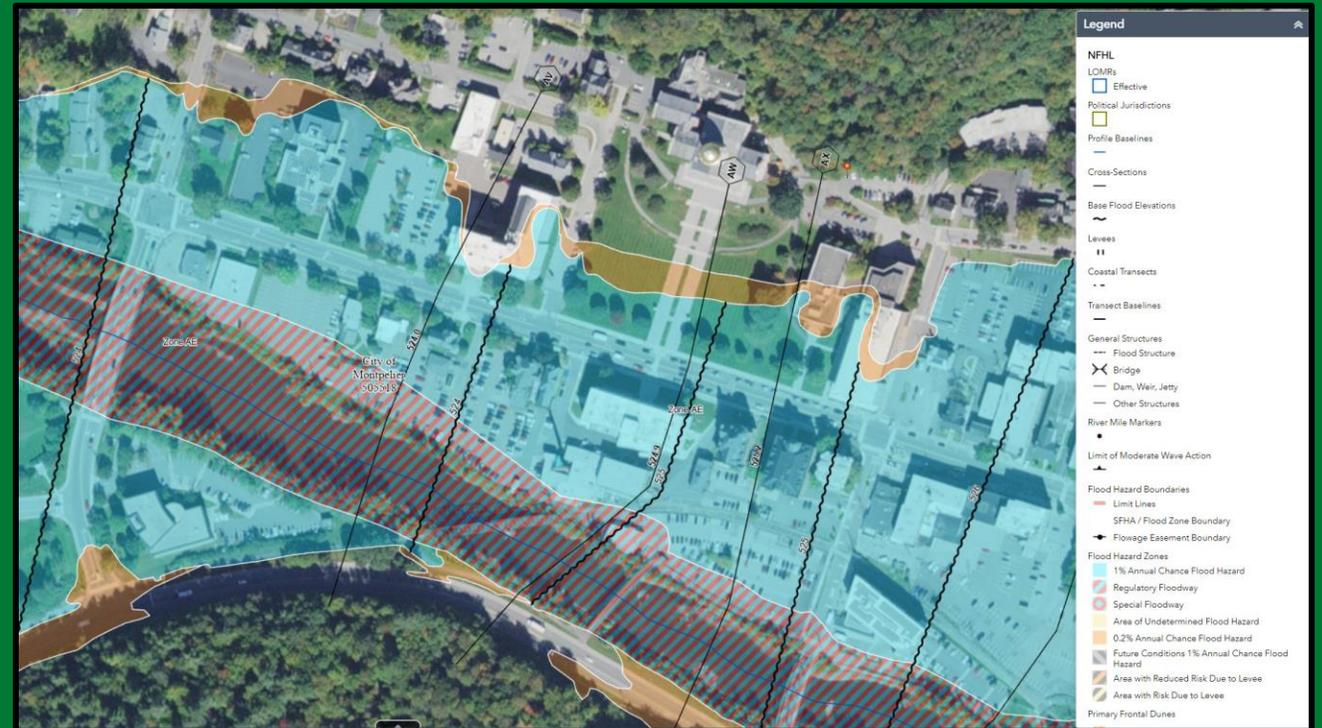
- National Electrical Manufacturer's Association

Flood Hazard Area and River Corridor Protection Procedure

- Between 2010 and 2014, the Vermont General Assembly passed four separate Acts (110 (2010), 138 (2012), 16 (2013), and 107 (2014)) containing various sections directing the Agency to establish a *River Corridor and Floodplain Management Program* and to promote and encourage the identification and protection of flood hazard areas and river corridors to reduce flood and fluvial erosion hazards.
- 7.3(ii) Non-residential structures shall be elevated such that the lowest floor is at least two feet above the **base flood elevation**, or shall be dry-floodproofed and certified in accordance with FEMA floodproofing guidance to at least two feet above the base flood elevation

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FEMA's National Flood Hazard Layer



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Floodproofing

Dry floodproofing involves sealing building walls with waterproof compounds so that the structure is watertight.

Example: Montpelier Heat Plant

Wet floodproofing involves allowing floodwaters to flow in and out of the structure while taking measures to reduce the damage caused by flooding. Measures include anchoring the building, venting the building to allow water to flow freely, and relocating vulnerable items, such as utilities, to higher levels.

Example: Weeks building

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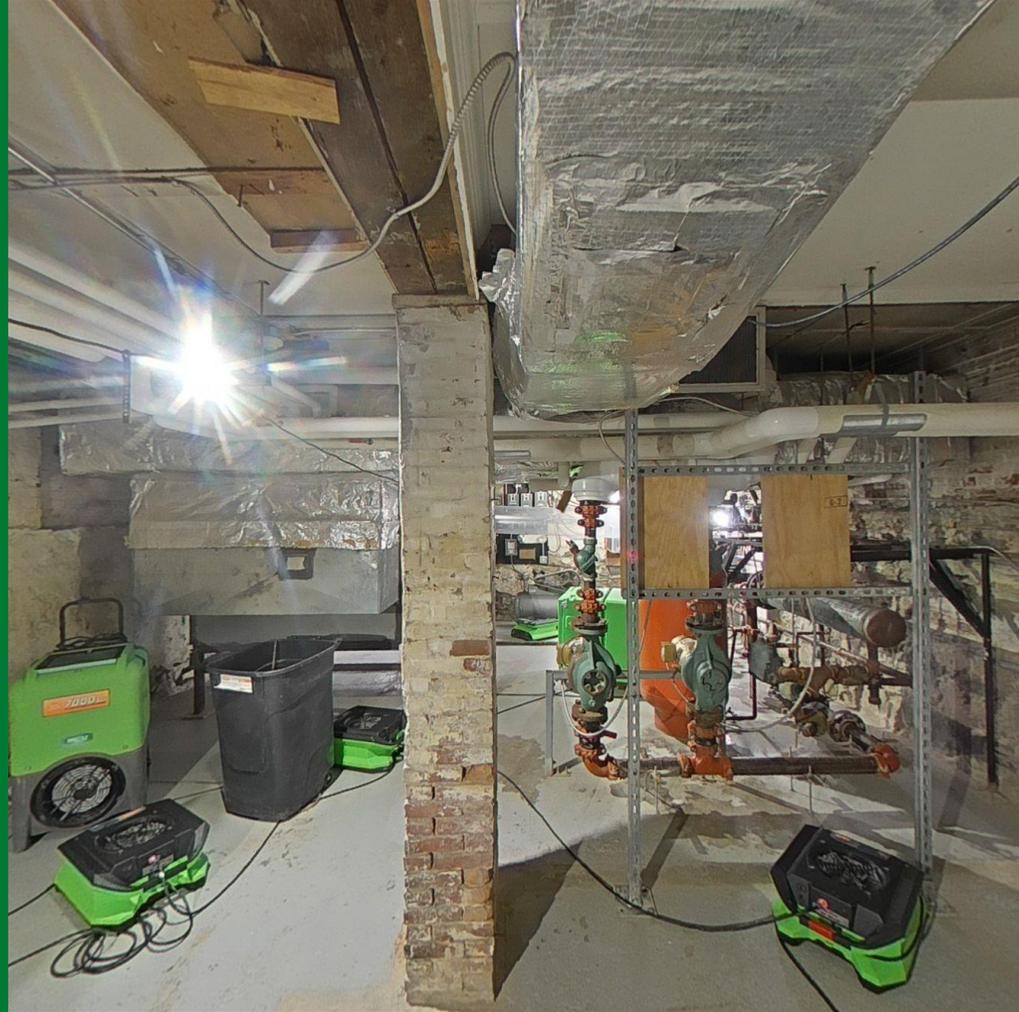
Group 1 & 2 Code Compliance

- All necessary mechanical, electrical, and plumbing (MEP) systems must be at base flood +2 or dry floodproofed.
- For most buildings on the south side of State Street, the systems take up a minimum of 30 square feet.
- Size and configuration of many of the historical buildings limit options for relocating systems.
- Condensate pump must be at the lowest point in the heating system.
- Radiators located 1-2 feet above the condensate pump.

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Group 1 Code Compliance

South side of the street, basement impact



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Group 2 Code Compliance

South side of the street, basement and first
floor impact



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Group 2 Code Compliance



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Group 2 Code Compliance



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Group 3 Code Compliance

North side of the street

- All necessary mechanical, electrical, and plumbing (MEP) systems must be at base flood +2 or dry floodproofed.
- Existing basement mechanical rooms:
 - 109: MEP mechanical space 3,010 SF; elevator mechanical 231 SF
 - 111: MEP mechanical space 2,041 SF
 - 133: MEP mechanical space 3,362 SF; elevator mechanical 79 SF
- Hydraulic elevators' mechanical rooms must be relocated
- Loss of communal spaces and specialized storage
 - 109: Auditorium
 - 111 & 133: Meeting rooms, restrooms, cafe
- Displacement of space

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Group 3 Code Compliance



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Group 3 Code Compliance



Questions?